Sensible Habitats

Investigating the Intriguing Diversity of Animal and Plant Life at Fort Point

Overview

How does a healthy habitat help living things grow? This essential question frames *Sensible Habitats* and is meant to allow students to engage in place-based inquiry science in the environment around Fort Point National Historic Site. The essential question:

1. Reflects the essence of what they will study without directing them to one correct answer.
2. Provokes "how" or "why" questions rather than "what" questions.
3. Applies to places beyond Golden Gate National Recreation Area.
4. Invites discussion from everyone based on both experience and understanding.

Students conduct their own science investigation (aided by park staff and adult chaperones) in which they learn about the plants and animals through inquiry. Students pose questions based on their own observations. The program provides a tangible model for students to explore patterns in aquatic and terrestrial habitats through learning activities in the classroom and in a National Park.

Program Goals

- Enrich their understanding of place through inquiry.
- Experience National Parks as places for learning and recreation, and develop a personal connection to their local national park.
- Learn about the natural patterns that shape the Presidio habitat.

Next Generation Science Standards:

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Program Logistics

Please take careful note of the following:

- The teacher and chaperons are responsible ultimately for the conduct and safety of the students.
- Clothing appropriate to the nature of the activities and weather conditions at the park is required. Advise students to dress in layers to accommodate the variable temperature characteristics at the Golden Gate.
- The class should be organized into small groups.
- Arrangements can be made to accommodate students with special needs. Please discuss specific circumstances with National Park Service staff prior to your visit.

Rules and Regulations

There are park rules and regulations that your class should be made aware of before their visit. Please share the following rules with them:

- The class will stay on the trail at all times unless directed by park representative to do otherwise.
- No plants or other natural features can be removed from the park.
- Feeding or disturbing animals is not allowed.

Cancellation Policy

Please let us know if you need to cancel the program a week in advance.

Program Description – Sensible Habitats

The program has three elements: pre-visit classroom lessons led by the teacher; a field session at Fort Point facilitated by NPS and assisted by adult chaperones; and suggested post-visit lessons guided by the teacher.

Perspectives – Teacher Facilitated Classroom Lessons

Activity One
Teacher introduces the students to Sensible Habitats by posing the essential question on the board:

How does a healthy habitat help living things grow?

Teacher first asks students to define healthy, habitat, living things, and grow. Teacher records their responses. After students define the concepts, they answer the question in pairs, in a group, or with the entire class. They share their ideas of the essential question, including in the discussion what they might find in an unhealthy habitat.

Activity Two
Tell students they are going to visit a national park. Show students the Sensible Habitats power point. Have them generate questions about what they see and what they might want to investigate at the park. You can share their curiosity with the NPS staff when you arrive for the program.

Activity Three

If time allows, model the park investigation ahead of time in the school yard (or nearby green or natural area) by searching for patterns. Have students make observations and pose questions about what they see and wonder.

Sensible Habitats Field Session

Summary

Students are invited to use their senses while investigating the essential question in the park through applied inquiry methods. Students make initial drawings to demonstrate an element of their learning. NPS staff and adult chaperones facilitate discussions at each stop.

Time- 3 hours on-site (10am-1pm)

Investigation at Fort Point

NPS staff welcomes the students and reviews the safety rules. Staff then leads small groups of students first along the main trail, and then down to the aquatic habitat near the Fort Point Pier. Chosen stops provide opportunities for the students to observe the two habitats and identify patterns in the environment. Students are given tools, such as magnifying glasses, to assist them in their exploration. Students share their questions with each other, park staff, and adults. Students begin their drawings. Using an inquiry approach, NPS staff guides students to compare their pre-visit questions and assumptions with their new understandings of the Fort Point environment.

Post-Visit Classroom Lessons

These follow-up activities are designed to build upon the students' inquiry at Fort Point. Students can demonstrate what they have learned and how they have learned during their national park experience. Please conduct at least one of the following activities:

Activity One

Teacher creates skeleton drawing of aquatic and terrestrial habitats. Students complete their drawings and place it in the appropriate habitat. Teacher facilitates class discussion about the two habitats based on the student experience and drawings.

Activity Two

The Healthy Habitat Hopscotch

1. Draw a large sized hopscotch course with chalk or use butcher paper or draw one in the sand or dirt with a stick. You may use small hula hoops as well.

2. Explain to the students that they are moving through a Sensible Habitat where all living things are connected to each other. Tell them that every living and non-living thing in the Habitat helps all the creatures to grow and survive. Each square represents some part of the habitat where animals, insects, and plants have to live.

3. Students are then challenged to move carefully through the habitat over the course one at a time. They do not have to step on every square, however, they must not go outside the course. All the students should be successful in the first movement.

4. Explain to the students that people came and cut many of the trees of the habitat. Without the trees, too much sunlight came into the habitat and chased away the banana slugs. Banana slugs like the cool shade of the forest where they can snuggle into the cool wet earth. Because the trees were cut down, all the fallen leaves and limbs that once provided cover for the salamanders, beetles, and roly-polys are now gone. The little critters had to leave and find another habitat. Now the birds that depended on the insects and worms for food do not visit here anymore – they, too, have left the habitat to find food elsewhere. It has not rained in a long time and the flowers of the habitat are dying. The butterflies no longer visit the habitat because their favorite flowers for laying their eggs have disappeared. One by one, the creatures of the habitat can no longer live a healthy life because their home is becoming "out-of-balance".

5. Tell the students to hopscotch through the habitat again, but this time put an X over the squares where there are missing pieces of the Healthy Habitat. This time they may have to hop over two squares, and it will become more difficult to pass. If they touch outside the "healthy" squares with their feet, they will have been injured or forced out of the habitat due to the changing environment. Have the injured participants stand to the side to view the movements by other students through the habitat, and ask them to give their suggestions on how to repair the habitat.

6. After all the students have moved through the habitat, replace two more spots and the repeat the process until all the students cannot find a place in the habitat for survival.

7. Have students discuss how they can bring a healthy environment back into the habitat.

8. Add two "restored" squares (volunteers have planted new trees and a stream once again flows through the habitat).

9. Add more open squares with every Sensible Habitat suggestion from the class!